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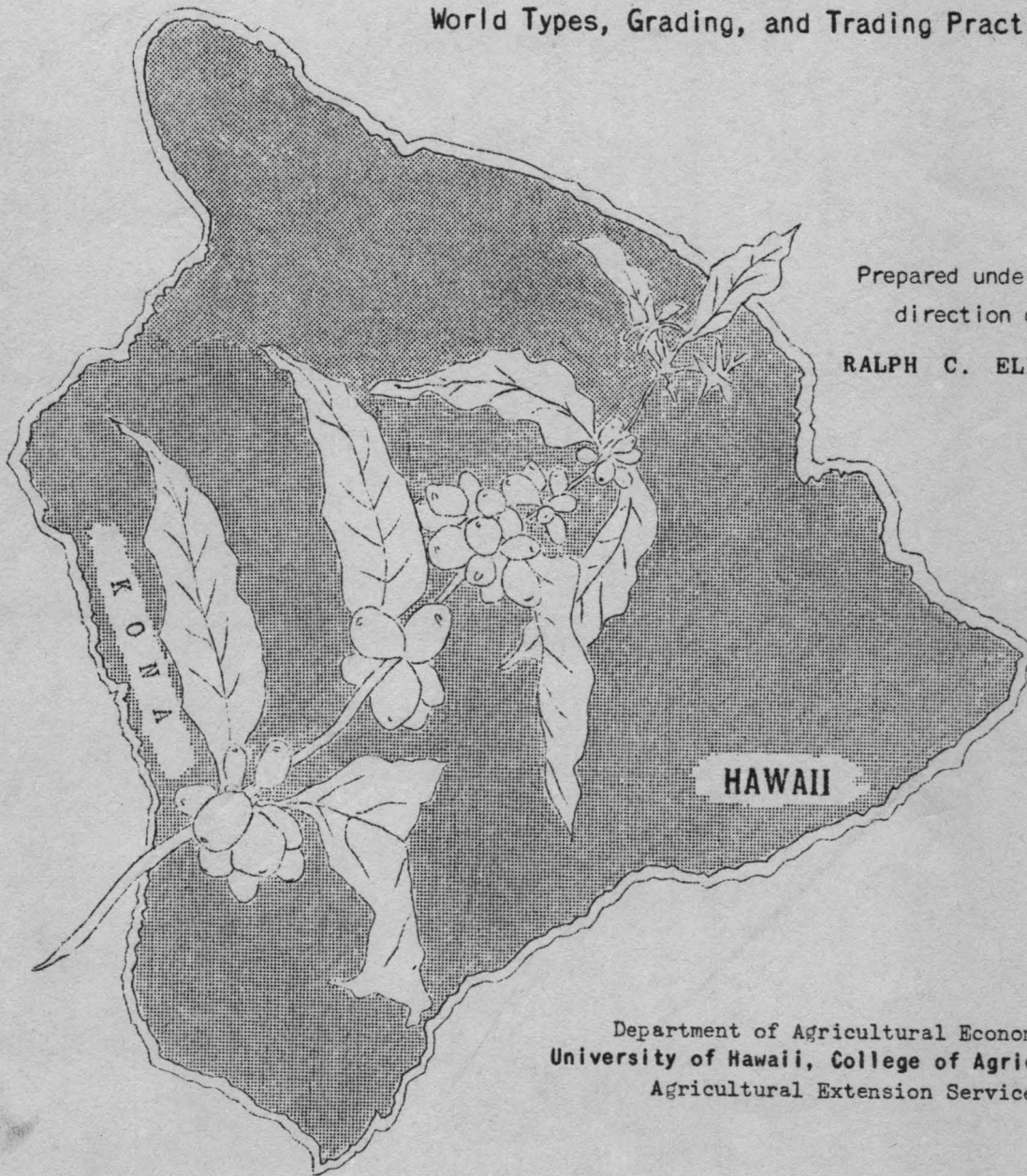
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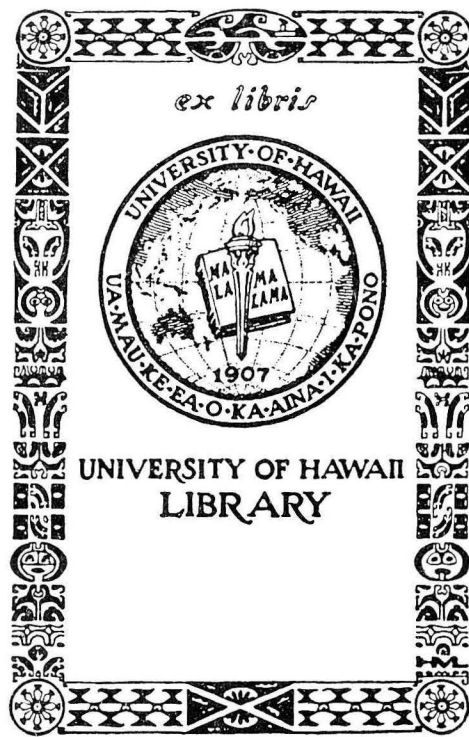
HAWAIIAN COFFEE

With Some Information About
World Types, Grading, and Trading Practices

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FOREWORD

This report outlines some trends in Hawaii's coffee industry in relation to world marketing (as of October 1950), with export, import, price, production, and consumption data. Some of the export data prior to 1920 were assembled for rather arbitrary periods, because of the difficulty of showing comparable statistics taken from the same source or reported on the same yearly basis. That is, some early statistics were published by fiscal years, others by calendar years. Harvesting and marketing data fit naturally into a fiscal year period, and export-import information is usually for the calendar year. Accurate production figures prior to 1920 for Hawaiian coffee are not available. Where possible, United States government agencies have been the source of statistical data.

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HAWAIIAN COFFEE

Hawaiian coffee represents a very small percentage of the world's production--about 2/10 of 1 percent. More than 85 percent of the world's supply of coffee comes from Latin America, mostly from Brazil and countries bordering on the Caribbean. For many years, until World War II, Brazil supplied three-fifths or more of the world's coffee. Since 1941, Brazil's exportable production has fallen to about half of the world supply, while Colombia's and Central America's have increased.

PRODUCTION

During the past decade, Hawaiian coffee production has averaged about 6 million pounds per crop year. Coffee occupies about one-fourth of the area planted in diversified crops.

Coffee is now produced commercially in the Hawaiian Islands only in the Kona district on the western side of the island of Hawaii; hence the name, Kona coffee. The most successful plantings are at elevations of from 1,000 to 2,000 feet above sea level. This region is peculiarly suited to coffee growth--the soil is loose and rocky, the steep slopes insure good drainage, the climate is moderate without temperature extremes or strong winds, and shade and sunlight are favorably proportioned. In many coffee-growing countries, shade trees must be planted among the coffee trees, but in Kona the daily cloud blanket provides the needed shading. Kona's coffee yields are exceptionally heavy. The average per acre yields of 1,935 pounds of green coffee in 1939 and 1,229 pounds in 1949 were considerably greater than the yields of most coffee-producing countries. On the better Kona farms, yields of 15,000 pounds of

cherry coffee per acre, or 3,000 pounds of green coffee, have not been uncommon.¹

Some 3,500 acres of about 700 farms are now devoted to coffee growing in Kona. Most of the land, in plots of from 5 to 10 acres, is held under lease. In a few cases it is owned in fee simple. The tenants or owners, mostly of Japanese descent, operate their own farms with the help of their families. They employ additional labor only during the peak coffee-picking season, when from 2,000 to 2,500 workers, including hired labor, are needed. It has long been the custom in Kona to adjust school vacations to coincide with the fall harvest season, so that children can assist in the coffee picking.

Harvesting costs represent the largest item of expense in coffee production. During the war years, the harvesting problem was serious. Although the labor situation has been less acute since the war, there is still the problem of timing the labor supply to the peak period of harvest. If the coffee cherries ripen faster than they can be picked and there are heavy rains, the cherries fall to the ground and spoil. High losses may result. To avoid lowering the quality or yield, green fruit is not picked. There are several stages of ripeness in the same cluster of cherries, and each individual coffee cherry must be picked from its cluster. The branches cannot be stripped all at once. Hence, harvesting operations are time-consuming and expensive.

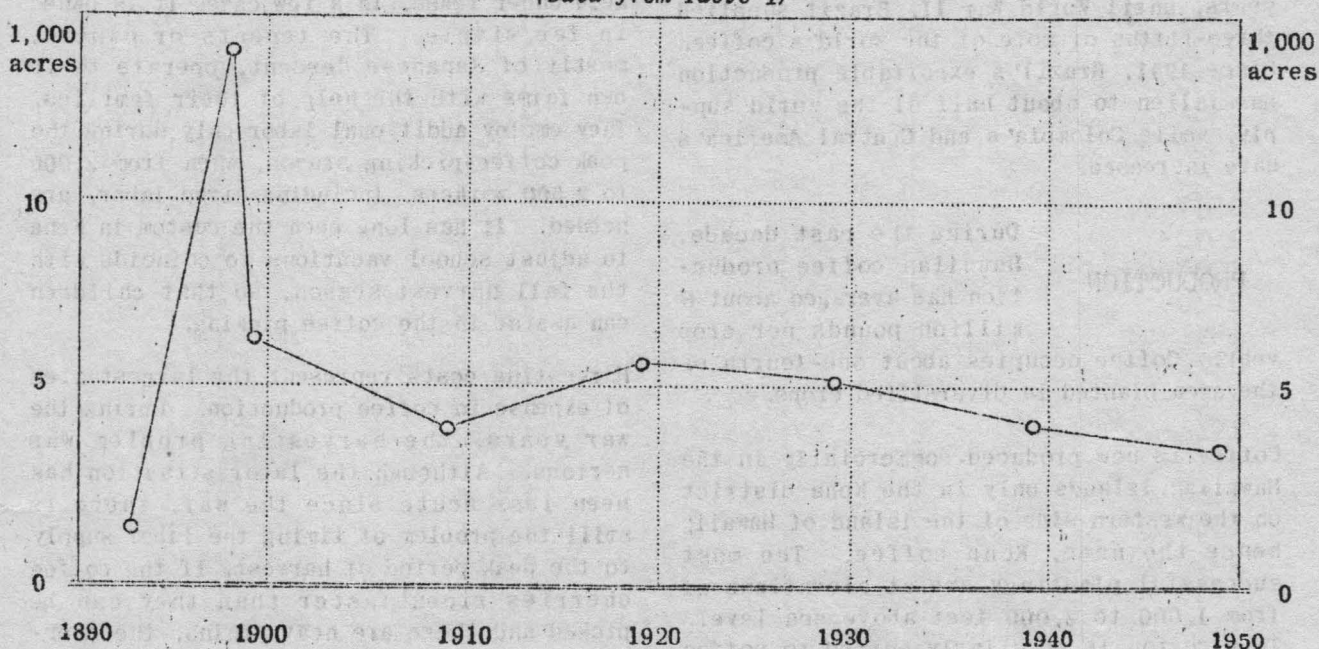
¹Five hundred pounds of cherry coffee are equal to 100 pounds of clean (green) coffee ready for roasting, or 125 pounds of parchment coffee. When green coffee is roasted, it loses 12 to 20 percent in weight, but increases from 30 to 50 percent in bulk. The terms used to describe coffee in its various forms from tree to roaster are explained on page 8 in the section on grading.

Table 1.--*Hawaiian Coffee Acreage and Number of Farms, 1893-1949*

Year	No. of farms	Acres	Year	No. of farms	Acres
1893	1	1,500	1919	755	5,687
1898	1	13,947	1929	988	5,360
1899	512	6,451	1939	722	4,136
1909	709	3,727	1949	700	3,500

¹Data not available.

Source: 1893, 1898, 1899, *Hawaiian Annuals*; 1909, 1919, 1929, 1939, *Census of the United States*, U. S. Dept. of Commerce, Bureau of the Census; 1949, *Statistics of Diversified Agriculture in Hawaii*, Univ. of Hawaii, Agr. Ext. Serv., Agr. Economics Report No. 1.

Chart 1.--*Hawaiian Coffee Acreage, 1893-1949*¹
(Data from Table 1)

¹The sharp rise in acreage during the latter part of the nineteenth century occurred during a period of great optimism, when coffee raising was regarded as a safe undertaking. Depression followed in the early 1900's, and many plantations abandoned coffee growing. Later the coffee plantations were subdivided into small holdings of a few acres each and leased to individual farmers.

Table 1 and chart 1 show the changes in Hawaiian coffee acreage during the past half century.

Hawaii's coffee production during the past 30 years is shown in table 2.

EXPORT AND IMPORT BALANCE

The volume of Hawaiian coffee exports since 1845 is given in Chart 2.

Exports of green coffee to the United States reached a peak of 7.8 million pounds in 1932. After that,

Table 2.--*Hawaiian Green Coffee Production and Value, 1920-50*

Crop year ¹	Quantity	Value ²	Value
	1,000 pounds	1,000 dollars	Cents per pound
1920-21	4,600	802	17.4
1921-22	4,700	704	15.0
1922-23	4,700	664	14.1
1923-24	4,175	978	23.4
1924-25	6,500	1,828	28.1
1925-26	4,575	1,491	32.6
1926-27	6,425	1,796	28.0
1927-28	6,000	2,015	33.6
1928-29	8,475	2,166	25.6
1929-30	8,847	1,327	15.0
1930-31	10,000	1,740	17.4
1931-32	9,808	1,540	15.7
1932-33	9,233	1,099	11.9
1933-34	10,388	1,454	14.0
1934-35	9,659	1,101	11.4
1935-36	9,828	1,090	11.1
1936-37	9,047	977	10.8
1937-38	8,079	913	11.3
1938-39	8,454	947	11.2
1939-40	8,002	928	11.6
1940-41	8,317	1,040	12.5
1941-42	7,000	945	13.5
1942-43	7,193	1,172	16.3
1943-44	6,789	1,000	14.7
1944-45	7,656	1,250	16.3
1945-46	6,300	1,028	16.3
1946-47	6,900	1,746	25.3
1947-48	6,990	1,825	26.1
1948-49	5,900	1,569	26.6
1949-50	4,300	1,793	41.7

¹Ending June 30.²The sources for data prior to 1940 do not indicate the basis on which the values were calculated. From 1940 on, value is f.o.b. mill for prime coffee.

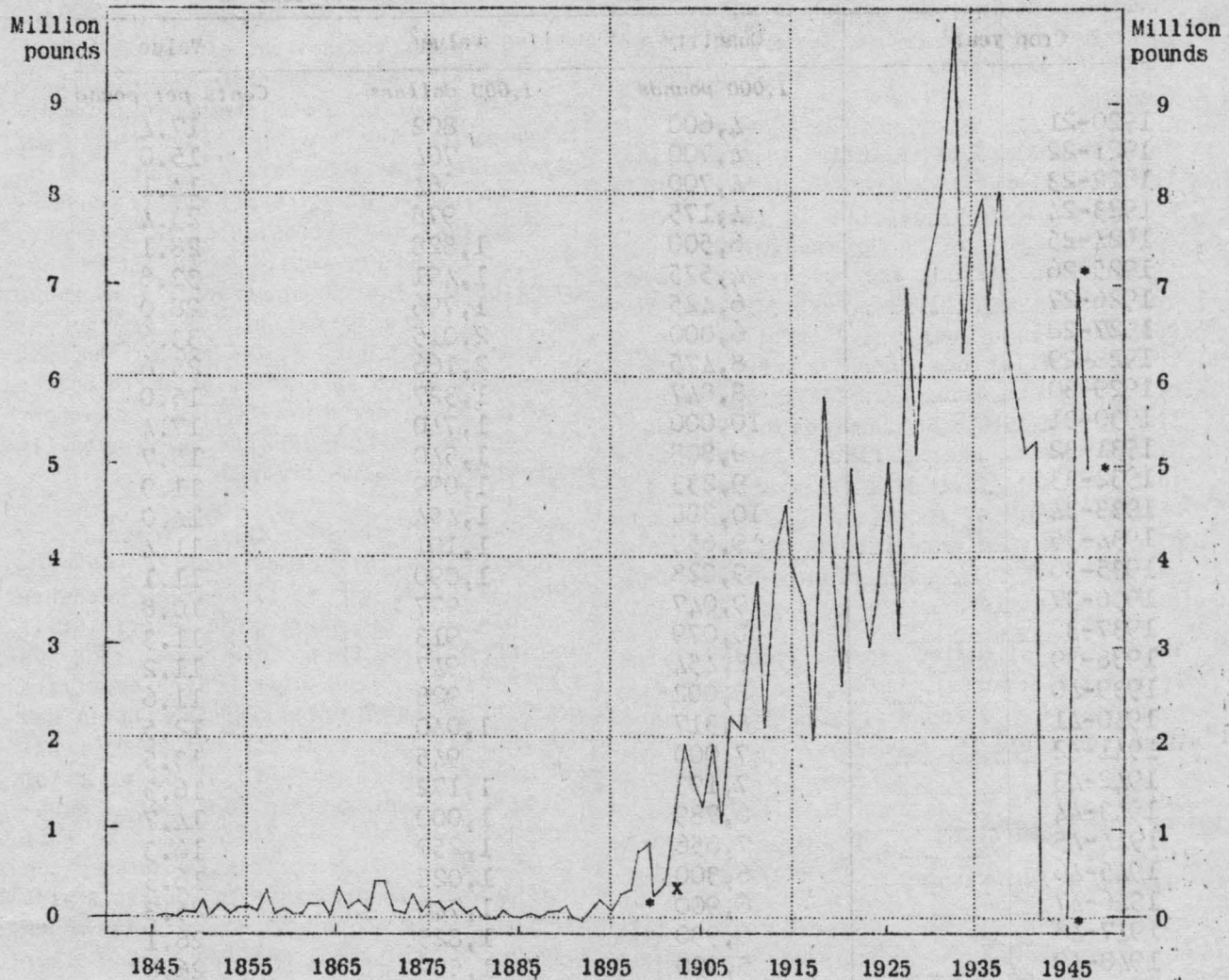
Source: 1920-1930, *Fourth Annual Summary of Costs and Farm Efficiency Studies in Coffee Production*, Univ. of Hawaii, Agr. Ext. Serv. Circular No. 29; 1930-1940, *Statistical Report of Diversified Agriculture in Hawaii*, Univ. of Hawaii, Agr. Ext. Serv., prepared for 1946 Statehood hearing; 1940-1950, Univ. of Hawaii, Agr. Ext. Serv. estimates.

they declined steadily to a low of 1.3 million pounds in 1940, rising again in 1941 to 2.5 million pounds. During World War II, all exportable coffee was consumed by the armed forces. Exports were resumed in August 1945. In 1946, the United States took 7,147,000 pounds of Hawaiian green coffee, and the following year, 5 million pounds valued at 1.5 million dollars. The last available export figures are for 1947. The United States customs office has not kept

export-import data on trade between the territories and the Mainland since early in 1948. Accurate data on roasted coffee shipped to the Mainland are not available, but the amount is very small.

Both green and roasted coffee are exported from Hawaii to foreign countries, but far more is shipped green than roasted. With the exception of 1924, 1931, and 1938, when 72,000, 90,000, and 40,000 pounds respectively went to foreign countries, roasted

Chart 2.--Total Hawaiian Coffee Exports, Green Basis, 1845-1947¹
(Data from Table 5, Pages 15 and 16, and Table 11, Pages 23 and 24)



*Does not include exports to foreign countries.

^xDoes not include exports to United States.

¹Green and roasted coffee not segregated prior to 1901.

coffee exports since 1920 have varied between 1,000 and 12,000 pounds. However, green coffee exports to foreign countries increased from 1.5 million pounds in 1931 to 3.9 million pounds in 1940. Shipping was resumed after the war, but exports to foreign countries have not maintained a pre-war level. Only 467,000 pounds of green coffee were exported to foreign countries in 1948, and 353,000 pounds in 1949. Of the

1948 exports, 286,730 pounds of green coffee went to the Philippines, 171,700 to Canada, 8,650 of green and 6,420 pounds of roasted to Hongkong, and 135 pounds of roasted coffee to Japan. In 1949, the Philippines took 254,792 pounds of green, and Canada 90,900; 7,120 pounds of green and 4,715 of roasted went to Hongkong; and 1,970 pounds of roasted coffee went to Japan.

Total exports of coffee, on a green basis², were highest in 1932, at 9,857,000 pounds. (For detailed data on Hawaiian coffee exports, see tables 5 through 9, pages 15 through 20.)

Total imports of green coffee to Hawaii from the United States advanced from 134,000 pounds in 1930 to 366,000 in 1940. Most coffee imported is in the roasted form. In the 1930-40 period, the volume of roasted coffee was usually between 500,000 and 900,000 pounds, but since then imports of roasted coffee have been between 1 and 2 million pounds annually. The larger population in the 1940's accounts for the increased volume during that period. In 1947, the last year for which data are available, 2.4 million pounds of roasted and 69,000 pounds of green coffee were imported. No record was found of coffee imports to Hawaii from foreign countries.

The balance of coffee exports (total exports less total imports), on a green basis, has ranged between 2 and 9 million pounds since 1920 (see table 11, page 23).

CONSUMPTION:

WORLD AND HAWAII

The United States, by far the greatest coffee market, has taken more than 70 percent of total world coffee imports since 1940. During the 1940's, the United States consumed from 250 to almost 500 times as much coffee as Hawaii produced. In 1935, United States net coffee imports amounted to 1.7 billion pounds; in 1940, more than 2 billion pounds; by 1949 imports had increased to more than 2.9 billion pounds. Coffee has been among the country's first half-dozen imports in value. In 1947, coffee ranked first, accounting for more than 10 percent of the value of total imports. Coffee provides the basis of trade with several of the Latin American countries, furnishing them the foreign credits they need to pay for United States exports.

The highest per capita consumption of coffee, in general, is in the North Temperate Zone countries, particularly the United States, Scandinavia, and western Europe. Prewar per

²One pound of roasted coffee is equivalent to 1.1905 pounds of green.

capita consumption in Scandinavian countries exceeded that of the United States. The United Kingdom and several of its dominions, although within the temperate climate range, are only moderate coffee consumers. People in producing countries are heavy users, but information from these areas is not particularly reliable; Brazil's per capita consumption in 1948 was estimated at 16.3 pounds. Both total and per capita world coffee consumption has increased steadily throughout the past century, except for the two war periods. The United States and Europe have taken from 90 to 95 percent of world coffee imports, but Europe's drastic postwar economy has kept her coffee imports below normally prosperous peacetime demands.

European countries have import restrictions on coffee that affect per capita consumption--tariffs, import licensing, exchange controls, and the like. The import tariff on coffee in the United Kingdom in 1936 was 2.08 cents per pound for Empire countries and 3.13 cents for other areas. Spain had the highest tariff, a duty of 88.91 cents per pound, which rose to \$1.08 by 1945. Relatively fewer restrictions in the Scandinavian countries would account to some extent for the high per capita consumption in that area. Imports into the United States are duty-free, bound by trade agreements with Brazil, Colombia, and some of the other producing countries.

Per capita consumption of coffee in Hawaii has been lower than that on the Mainland. The probable reason for the difference is that the large Oriental population in the Islands do not habitually drink coffee. From 1931 through 1935, the average per capita consumption in Hawaii was 7.4 pounds, compared with 12.7 pounds in the United States. In the period 1936 through 1940 the average Hawaiian per capita consumption was 8.8 pounds; that of the United States, 14.4 pounds. During World War II, coffee that would ordinarily have been exported was purchased by military agencies, and the civilian per capita consumption for that period cannot be determined accurately. The 1947 comparison is: United States, 17.3 pounds; Hawaii, 9.0 pounds. The amounts given for local consumption in table 3 are

Table 3.—5-Year Average Hawaiian Coffee Production, Exports, Imports, and Consumption;
Per Capita Consumption, Hawaii and United States; 1931-35 and 1936-40,
with 1947 Comparisons

Year	Production ¹	Total exports, green basis ²	Total imports, green basis ²	Total consumption ³	Civilian population, Hawaii ⁴	Per capita consumption, Hawaii	Per capita consumption, United States ⁵
	1,000 Pounds	1,000 Pounds	1,000 Pounds	1,000 Pounds	1,000 Persons	Pounds	Pounds
5-year average, 1931-35	9,818	7,982	992	2,828	380	7.4	12.7
5-year average, 1936-40	8,682	6,438	1,352	3,596	409	8.8	14.4
1947	6,900	5,080 ⁶	2,880	4,700	525	9.0	17.3

¹Fiscal year basis.

²Calendar year basis.

³Production plus imports, less exports.

⁴As of July 1st.

⁵Based on civilian population.

⁶Does not include exports (relatively small) to foreign countries.

Source: Summarized from table 11, page 23; population figures, Territorial Department of Health; per capita consumption in the United States summarized from *Consumption of Food in the United States, 1909-48*, U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Misc. Publication No. 691, August 1949, p. 86.

an approximation based on Hawaiian production on a fiscal year (ending June 30) basis, exports and imports on a calendar year basis, and the yearly civilian population as of July 1st.

In the past, within brief periods, world coffee consumption has responded but mildly to changes in price and purchasing power. Changes in population size, and high or low prices which persist long enough to affect consumer habits, account largely for changes in volume of coffee consumption.

TYPES OF COFFEE

Coffea arabica, the principal species of coffee, constitutes more than 90 percent of the world's commercial supply. The other two species of any commercial importance are *C. robusta* and *C. liberica*. The three species differ in appearance, resistance to disease, and flavor, depending on the growing conditions in different regions. *Arabica* grows in the Western Hemisphere and parts of Africa and Asia, usually at elevations of 2,000 to 5,000 feet. It is the type grown in Kona, Hawaii. *Robusta* and *liberica*, cultivated because of their resistance to diseases and pests, thrive best in low, hot regions from sea level to 2,000 feet, and are grown mostly in the Eastern Hemisphere. *Robusta* is rather neutral and flat in taste and is used mostly as a filler in cheaper coffees. *Liberica* berries do not fall when ripe, so when harvesting help is not available the ripe coffee may be left for picking later. This species is cultivated mostly by small growers, usually in countries with a limited labor supply.

Coffees grown in Brazil are considered in a class apart from all others. In the trade, coffees are known as either 'Brazils' or 'Milds.' Coffee grown in any country outside of Brazil is classified as 'mild.' The term is rather misleading, as 'milds' are not necessarily milder in flavor than 'Brazils.' They are considered higher in quality than 'Brazils,' and command higher prices. Milds are available in smaller volume, and are blended with Brazilian coffees to improve the flavor. Kona coffee

falls into the milds group and commands a premium in the markets.

Coffees are named according to the producing region or the port of export. Brazil coffees are identified by the producing districts near the ports of export, such as 'Santos' coffees (growths of Sao Paulo, South Midas, and North Parana) and 'Rios' coffees (grown in the State of Rio de Janeiro, part of Sao Paulo, Espirito Santo, and most of Minas). Sometimes Brazils are called by the states in which they are grown, as Sao Paulo, Minas Geraes, Parana, and others.

Milds also are named according to the country and region in which they are grown and the port of shipment. For instance, coffees from Colombia are called 'Medellins,' 'Manizales,' and so on. The type name also indicates a quality ranking. In smaller countries, the coffees may be named for the producing region plus certain production specifications, as 'high-grown,' 'washed,' 'naturals,' or 'hard-berry.'

Coffees are further described as 'hard' or 'soft.' 'Soft' describes coffees grown mostly in the State of Sao Paulo and exported from Santos. The flavor of Santos coffees is characteristically mellow, in contrast to the 'peculiarly rank,' penetrating flavor of 'hard' coffees. The 'hard' coffees produced in Brazil are the low-quality, low-priced products of commerce, and are relatively unimportant in the large world markets. *Robusta* and *liberica* also belong to this group, but they are produced on a very small scale. In general, coffees with the best flavors are produced at high altitudes. The beans are heavy and flinty, with a high acidity and strong flavor--good blending qualities. Coffee from lower altitudes is less acidic and brings a lower price.

The soft Santos coffees are considered Brazil's best; they are the ordinary, medium-quality, medium-priced product, mellow and rather sweet. Regardless of origin, all coffees shipped from Santos are known as soft. The best Santos coffee is known as 'Bourbon' and comes from the first few harvests of trees grown from Mocha seed (*C. arabica* raised in Arabia). After a few

years the form and flavor of the fruit changes, and the berries are sold as 'Flat Bean Santos.' Bourbon Santos can be used with the higher priced milds to reduce the cost and still give a desirable flavor. Hence, it is regarded as the best low-cost blending coffee. 'Harsh Santos' is another type, which brings a lower price than Bourbon and sometimes has characteristics of hard Rio coffees.

Milds do not have the rankness of Rio coffees, but are strong and acidic in the desirable sense, have a better aroma and appearance, and go farther in the cup. The mild varieties of *arabica* grown in Central and South America, the small quantity of Arabian coffee, and part of the African output constitute the world's high-quality coffees. Milds vary even more markedly in character than Brazilian coffees, and every country has its preference. Sometimes a coffee of limited supply, such as Mocha or Kona, has a 'romance appeal,' and will bring premium prices. Kona coffee, rated among the finest, is valued as a flavor blend in many well-known brands. It compares favorably with Guatemala- and Colombia-grown coffees in flavor, aroma, and other cupping qualities.

The characteristics of a few coffees, described by Ukers (*All About Coffee*, 1935), are as follows:

Bourbon Santos: 'Small bean, resembling Mocha, but making a handsomer roast with fewer quakers.³ In color it varies from dark to light green, and from yellow to a pale straw, often with a red center. True Bourbons are from the earlier crops. In the cup they are smooth and palatable without tang. If aged, new crop coffees usually have sharp acidity.'

Rio: 'Generally harsh and pungent in cup. The bean is larger than Santos, ranging from light to dark green in color.'

Medellin: 'Light to dark green; handsome rough roasters; best of Colombians; fine flavor and body.'

Manizales: 'Have a greater degree of acidity and less body than Medellins. While not possessing the style of Armenias [also from Colombia], they are satisfactory coffees and widely used.'

Kona: 'Large, blue, flinty bean, mildly acid; striking character.'

Hawaiian coffee in general is described as 'a large bean, blue-green to yellow-brown in color; handsome roaster, fine smooth flavor.'

GRADING

The sizing and sorting of coffee affect the price it will bring in the market, and are therefore important processing operations. Each coffee fruit, or cherry, contains two flat-sided beans. After the coffee cherries are picked, the first operation is the removal of the outer skins and pulp. Different countries employ different methods. In Kona, the cherry coffee is run through a pulping machine to remove the outer skin and pulp; the beans are fermented in vats of water, making them easy to wash; then they are spread out in the sun to dry. At this stage the coffee is in 'parchment' form. Next, the tough husk or parchment and the inner thin 'silver skin' surrounding each bean are removed. Various types of machinery may be used for this process.

The next operation, sizing, employs sieving or screening equipment. Sizing in Kona is done by screening, and the designations, on beans free from mustiness, are determined as follows: 'Extra fancy' beans do not fall through 5/16-inch round holes; 'extra prime,' 17/64-inch; 'peaberry,' 11/64-inch; and 'prime,' 1/4-inch. '3X' and '3' fall through 1/4-inch holes. Other minor categories, such as 'PBO,' 'O,' and '2C,' are finer breakdowns of 'peaberry' and '3X.'

After sizing, the coffee is sorted, usually by hand, to remove defective or discolored beans and foreign matter such as stones, pods, and shells. In former years, Kona coffee was sorted by hand to remove imperfections. A sorting system using an 'electric-eye' machine was tried out a few years ago, but the experiment was not successful

³Blighted and undeveloped coffee beans.

because Kona coffee beans are not uniform in color. Handsorting has been discontinued in Kona due to a shortage of labor and because the higher price that a superior grade of coffee would bring does not justify the expense of the labor involved in removing the imperfections.

The arbitrary grading standard used by the New York Coffee and Sugar Exchange to express imperfections is the black bean (dead coffee beans which drop from the trees before harvest). In Brazil, the grades run from 1 to 8 or 9, depending on the number of imperfections in an average sample of given weight. Some of the black-bean equivalents on which the counting of imperfections is based are:

- 5 broken beans equal 1 black bean,
- 3 shells equal 1 black bean,
- 1 small pod equals 1 black bean,
- 1 average-size stone equals 1 black bean.

Grade No. 1, which implies perfection, is not found commercially. No. 2 is the best grade purchasable; it allows four imperfections per pound. The average grade harvested in Sao Paulo is No. 5, which allows 46 imperfections per pound. Grading systems differ from country to country and may be more or less elaborate than the Brazilian method.

Coffee handled on the New York Coffee and Sugar Exchange is graded and classified by representatives of the Exchange. Under regulations based on the Pure Food and Drugs Act, coffee grading below a No. 8 Exchange type is prohibited from entering the United States. The Exchange provides quarters for grading purposes, and a licensed sampler delivers to the Exchange samples of each chop of coffee.⁴ After a sample is approved by representatives of both deliverer and receiver as being a true specimen of the chop, three graders and classifiers are selected by lot. Their majority decision determines the grade and deliverability of each chop. When all questions of grade and

quality are decided, the Exchange issues a Certificate of Grade, Quality, and Condition, stating that the coffees named are deliverable under a certain contract. The holder of the certificate may redeliver the coffees without further grading for a period of one year.

If the grower wishes to know in advance whether certain coffee is deliverable, he may, by essentially the procedure described, receive a Certificate of Classification, in advance of delivery. This certificate enables him, when the coffee is actually delivered, to obtain a Certificate of Grade, Quality and Condition.

Since coffee grading is based on such factors as size of the bean and the number of imperfections in a given amount, the commercial grade may not indicate the coffee's cup quality. A coffee classified high in the grading scale may not by itself make as good a drink as one further down the scale. Today it is standard practice for buyers and sellers to determine the merits of the particular lot of coffee by cup-testing. Roasters buy different types of coffee and blend them to make the final product marketed under their brand. These combinations or blends are closely guarded trade secrets.

TRADING PRACTICES

Buyers of green coffee operate in the 'spot' and 'futures' markets. Importers, brokers, jobbers, and roasters trading in the 'spot' market deal in the actual coffee stored in warehouses in the consuming country.

In 'spot' market trading, the trader may also buy or sell coffee 'to arrive'--a consignment on board ship on the way to market. Most business done in addition to a spot business is on a 'cost and freight' basis. Although the term 'cost and freight' means that all charges, including freight, are included in the offered price, the importer actually pays the freight when the coffee arrives in the United States port, and that amount is deducted from the draft in payment. When shipped on a consignment basis, the coffee is usually sold on an 'in-store'

⁴Coffee is classified before being shipped from the producing country by separating it into divisions known as 'chops,' a number being marked on each bag of a particular division to indicate the chop.

contract, and the buyer takes delivery at the warehouse. He is generally given the privilege of a month's storage before removing the coffee. Coffees are also sold c.i.f. (cost, insurance, and freight included in the price), f.o.b. (free on board steamer at loading port), or f.a.s. (free alongside ship at loading point).

In addition to the 'cost and freight' contracts, Brazilian shippers sell coffees to be shipped several months in the future. They may, for example, contract to ship 10,000 bags, at the rate of 1,000 per month for 10 months. This practice is a definite contract between buyer and seller for a definite type of coffee, and should not be confused with the 'futures' contracts on the New York Coffee and Sugar Exchange.

In the 'futures' market, trading consists of the purchase and sale of contracts for the later delivery of coffee. Contracts for delivery as far as a year in the future may be made. Delivery is specified for a particular month, the seller having the option of when during that month delivery will take place. Months most active in coffee deliveries are March, May, July, September, and December. Futures contracts can be bought, sold, and exchanged any number of times, and delivery is made to the last holder of the contract. Throughout the life of the contract, margins are made good daily by money deposited with the Clearing Association or demanded from it as warranted by variations in the market. Price fluctuations of 1/100 of a cent per pound record the shifting buying and selling pressure.

Only recognized and organized coffee exchanges are permitted by law to deal in futures. The only one in the United States (and the world's principal Exchange) is The New York Coffee and Sugar Exchange, founded in 1881 as The New York Coffee Exchange. It was the first national coffee trading organization in the world. Later, Europe and South America established such organizations for trading in coffee. There are exchanges in Santos and Rio de Janeiro in Brazil. New Orleans and San Francisco are large trading centers in spot coffee, but they use the New York market for futures operations.

Coffee to be delivered on futures contracts must comply with quality and grade regulations of the New York Coffee and Sugar Exchange and must be delivered to designated warehouses. The unit of trading is 32,500 pounds, or about 250 bags. Buying one contract, therefore, is equivalent to buying 32,500 pounds of coffee. Quotations on all contracts are in cents and hundredths of a cent per pound. When the price rises or falls one point, or 1/100 of a cent, it changes \$3.25 on a contract; a change of 1 cent per pound is equal to \$325 on a contract.

In 1882 the New York Coffee Exchange established the first contract for future delivery of coffee. It was known as the 'A' contract (or Rio contract) and was used for dealing in all coffees grown in North, South, and Central America, West and East Indies (except Natural Robusta and new and unknown coffees). No. 7 Rio coffee was the basis for quotation, all other types being judged in relation to it. After 55 years of trading, the old 'A' contract was abolished in 1937, and a new one inaugurated.

A contract calling for delivery of coffee shipped only from the port of Santos, known as Contract 'D,' was established in 1928. Quotations were based on Santos No. 4 grade, soft drink, fair to good roast, an average grade on delivery poorer than No. 5 not being permitted.

New contracts have been added by the Exchange from time to time, and old ones revised, but by 1950 only the 'D' and 'S' contracts were in active operation. Trading in a new 'S' contract will commence for delivery in September 1951 and thereafter. It permits delivery on coffee from the port of Santos, of No. 2 to No. 6 grades, with an average grade of No. 5 deliverable at a discount of 100 points, whereas the old 'S' contract permitted delivery of Santos No. 2 to No. 5 with a minimum average grade of 4 to 5 deliverable at a discount of 50 points.

In July 1950, trading in the 'D' contract for delivery in January 1951 and thereafter was suspended until further notice, trading

to be continued in the 1950 delivery positions. The Board ascribed its action to lack of interest in the 'D' contract.

The latest contract, 'U,' provides for coffee shipped from Santos, Paranagua, Angra dos Reis, and Rio de Janeiro, and washed coffees of growths of other South or Central American countries, including Mexico, Africa, West, or East Indies. The basic grade is Exchange Standard Type No. 5; fair to good roast, solid bean in the raw state, 'strictly soft.' Grades between 2 and 6 may be delivered as long as the total lot is at or above No. 5. Trading was to begin on September 5, 1950 for delivery in December 1950 and thereafter. Only a few scattered lots have been traded in the new 'U' contract, probably because of uncertainties as to grade and growth of coffee that might be tendered for delivery by sellers.

The New York Coffee and Sugar Exchange publishes information regarding growing conditions in Brazil, the movement of coffee in vessels from Brazil to import points, stock on hand in different primary markets, the receipts and deliveries daily, weekly, and monthly, and the prices prevailing in Rio de Janeiro and European markets. The records of the movement and supply of the crop are of the utmost value to dealers both in the United States and elsewhere. Although Hawaiian coffee is not traded on the Exchange, activity on the Exchange largely determines the price of Kona's product.

FACTORS AFFECTING PRICES IN THE LAST DECADE

With the beginning of war in Europe in 1939 and the blockade of European ports, the shortage of shipping, and general currency difficulties, Latin American countries lost at least 35 percent of their export markets. Stocks accumulated and prices dropped. In the summer of 1940 coffee prices were among the lowest on record.

The Inter-American Coffee Agreement of 1940 was largely responsible for the general price rise of coffee. In November 1940, this agreement, to run three years, was

signed by representatives of 15 American republics, including the United States. Its purpose was to promote orderly marketing in international trade of commodities of primary importance in the Western Hemisphere. Coffee represented 20 percent of the combined exports of the 14 Latin American countries. The agreement provided for the establishment of quotas for shipments to the United States and other points. These quotas covered coffee exports among the 14 countries approximately in accordance with their production and exports during the immediately preceding years. The quotas were flexible and could be adjusted, and they actually did increase several times as war changed the circumstances. The United States quotas applied to its customs territory, which includes Puerto Rico and Hawaii, so the volume of coffee shipments from these islands was not affected by the agreement. Although the agreement said nothing specific about prices, the participating countries expected and desired that a higher price level for coffee would follow. Prices did rise, as quotas were filled and speculative activity boomed, and Latin American growers demanded and received higher prices. Prices for parchment coffee rose from 12.6 cents per pound in 1943-44 to 19.5 cents in 1947. Quotas under the Inter-American Coffee Agreement were made inoperative in 1945, and the agreement itself was terminated in 1948.

In December 1941, price ceilings were established on coffee by the Office of Price Administration; this agency controlled prices on both growers' and consumers' levels until controls were removed after the war.

During the first 10 months of 1949, the retail average price for roasted coffee averaged 52 to 53 cents per pound; by December it had risen to 73.4. The dramatic rise in coffee prices in 1949-50 was for some time headline news in the press. During the first half of 1950, imports into the United States dropped about 15 percent. In December 1949 an investigation was undertaken by the Agriculture Subcommittee on the Utilization of Farm Crops (Senator Gillette, chairman). In June, the Gillette Committee released its recommendations, which were

later revised by the Senate Agriculture Committee. A control bill was agreed on by the Senate and House. With the Korean war, when stocks in the United States were abnormally low, a sharp upsurge in demand came and prices rose again. In September 1950, the Korean war news, developments in Washington having to do with possible controls, and Brazilian weather were the most important factors in the coffee industry. Prices declined somewhat after United Nations' military successes in Korea.

Green coffee is not highly perishable, and storage costs are not heavy. Hence the variation in the volume held by coffee traders in futures contracts has helped to control the price influence of highly variable annual production. However, wide price fluctuations do occur, because of the large commercial risks involved. Growers sometimes find that large crops bring less income than small crops.

The price level for 'milds' is somewhat higher than that for 'Brazils,' the difference depending mostly on quality. Usually, the higher the price level, the wider is the spread between the two.

The price of Hawaiian coffee is largely dependent upon that of other world coffees prevailing on the New York Coffee and Sugar Exchange, but Kona coffee usually commands a relatively high price. The prices of Hawaiian coffee during the past several years may be compared with prices of some Brazilian and Colombian types in table 4 and chart 3, pages 13 and 14. The comparison is not exact, as Hawaiian coffee prices are f.o.b. Honolulu and the other prices include cost of delivery to dock or warehouse. Present freight costs from Honolulu to west coast ports are 2.9 cents per pound of coffee.

Table 4.--Yearly Average Green Coffee Prices of Brazil Rio 7s and Santos 4s, Colombia Manizales, and Hawaii Prime, 1921-1949¹

Year ²	Rio 7s	Santos 4s	Manizales	Hawaiian
Cents per pound				
1921	7.4	10.6	15.9	15.3
1922	10.4	14.5	17.6	16.2
1923	11.6	14.8	19.8	18.7
1924	16.6	21.1	26.4	23.8
1925	20.1	24.2	29.1	26.9
1926	18.2	22.1	29.5	27.9
1927	14.8	18.8	26.6	25.2
1928	16.9	23.2	27.8	26.6
1929	15.9	22.1	23.8	29.6
1930	8.8	13.1	17.9	18.0
1931	6.2	8.7	16.3	15.9
1932	8.0	10.5	11.8	12.0
1933	7.8	9.2	10.6	11.9
1934	9.8	10.4	14.2	12.4
1935	7.2	8.9	10.9	11.4
1936	7.5	9.4	11.4	10.8
1937	8.9	10.8	11.7	11.0
1938	5.1	7.6	11.1	11.4
1939	5.1	7.5	12.0	11.6
1940	5.1	7.0	8.7	9.9
1941	8.0	11.3	15.0	10.7
1942	9.4	13.4	15.9	14.4
1943	9.4	13.4	15.9	17.2
1944	9.4	13.4	15.9	17.2
1945	9.4	13.4	15.9	17.2
1946	11.7	16.6	19.2	17.2
1947	13.5	26.7	30.1	26.2
1948	14.3	27.0	32.6	27.5
1949	21.8	32.0	37.4	42.6

¹Brazilian and Colombian monthly approximate spot prices ex-dock or ex-warehouse in New York; Hawaiian prices f.o.b. Honolulu averaged from values of exports to the United States and to foreign countries, 1921-41; Univ. of Hawaii, Agr. Ext. Serv. estimates, 1942-49.

²Prices controlled by O.P.A. 1942-46.

Source: Brazilian and Colombian coffee prices, *Tea and Coffee Trade Journals*; Hawaiian prices from Tables 7 and 9, pages 17 and 19, and Univ. of Hawaii, Agr. Ext. Serv.

Chart 3.--Average Yearly Coffee Prices: Brazilian Rio 7s and Santos 4s,
Colombian Manizales, Spot Prices New York, and Hawaiian Prime,
f.o.b. Honolulu, 1921-49

(Data from Table 4, Page 13)

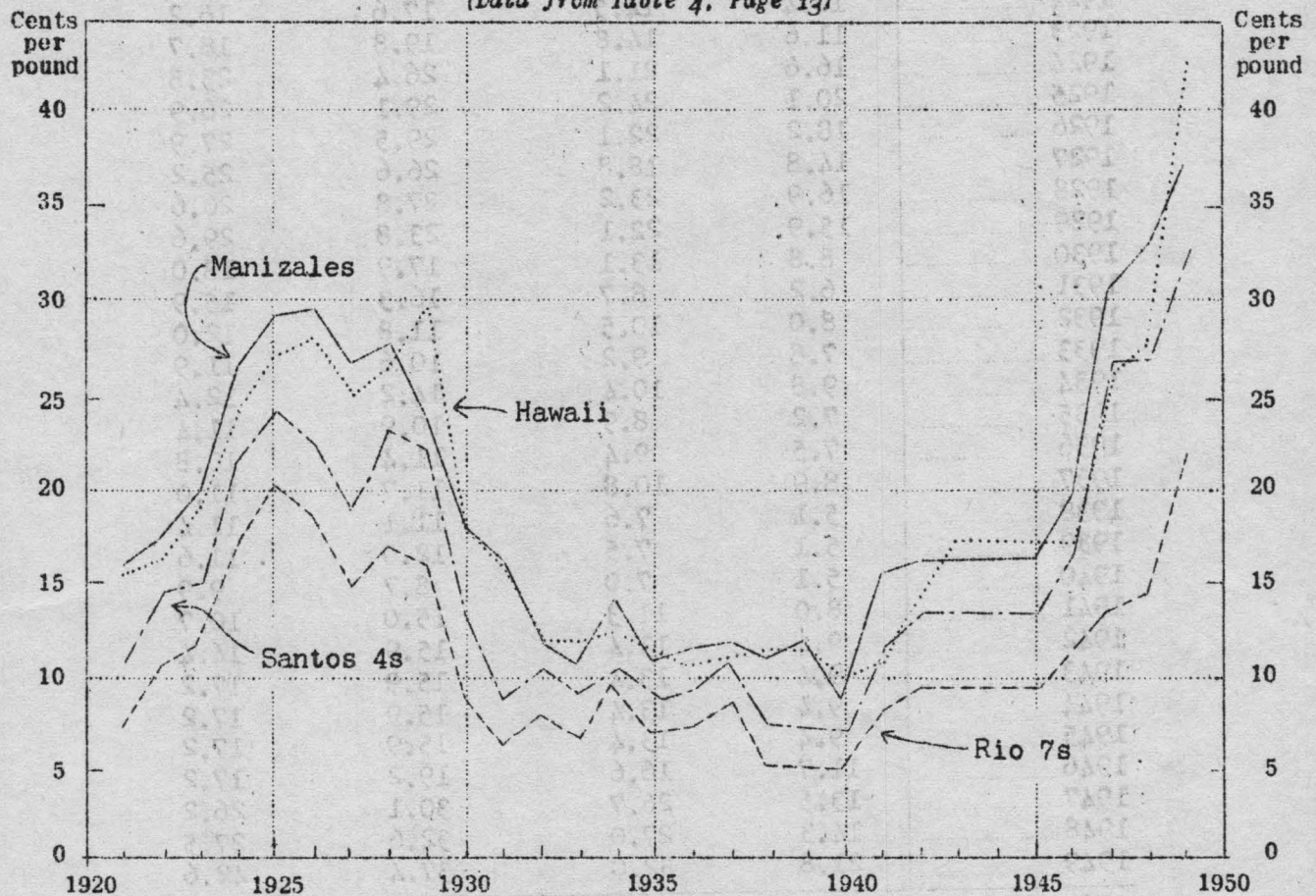


Table 5.--Volume and Value of Coffee Exports from the
Hawaiian Islands, 1845-1900¹

Calendar year	Exports to the United States ²	Exports to countries other than the United States	Total exports	Value ³
	Pounds	Pounds	Pounds	Dollars
1845			248	
1846			1,000	
1847			26,243	
1848			58,065	
1849			28,231	
1850			208,428	
1851			27,190	
1852			134,067	
1853			45,496	
1854			87,704	
1855			77,616	
1856			63,532	
1857			311,807	
1858			64,866	
1859			82,528	
1860	25,681	23,285	48,966	
1861	27,952	17,414	45,366	
1862	57,523	88,940	146,463	
1863	91,034	42,137	133,171	
1864	33,020	17,063	50,083	
1865	262,180	48,619	310,799	
1866	89,347	4,335	93,682	
1867	97,840	29,706	127,546	
1868	49,574	28,799	78,373	
1869	328,145	12,696	340,841	
1870	255,591	159,820	415,411	
1871	42,633	4,296	46,929	
1872	34,730	4,546	39,276	
1873	255,025	7,000	262,025	
1874	67,286	8,210	75,496	
1875	163,715	1,962	165,677	
1876	144,066	9,601	153,667	
1877	118,249	12,796	131,045	
1878	120,185	7,778	127,963	
1879	68,134	6,141	74,275	
1880	75,222	24,286	99,508	
1881	18,629	283	18,912	
1882	7,981	150	8,131	
1883	15,857	200	16,057	
1884	4,181	50	4,231	
1885	1,300	375	1,675	283
1886	4,256	1,675	5,931	1,067
1887	5,300	0	5,300	972
1888	5,980	1,150	7,130	1,698
1889	43,023	650	43,673	8,626
1890	88,491	102	88,593	14,737

Continued

Table 5.--(continued)

Calendar year	Exports to the United States ²	Exports to countries other than the United States	Total exports	Value ³
	Pounds	Pounds	Pounds	Dollars
1891	2,851	200	3,051	1,018
1892	13,568	0	13,568	3,238
1893	49,111	200	49,311	10,951
1894	147,159	41,991	189,150	38,118
1895	114,983	3,772	118,755	22,824
1896	236,788	18,867	255,655	53,650
1897	238,228	48,930	337,158	99,697
1898	659,947	73,338	733,285	115,945
1899	716,779	108,085	824,864	132,347
1900 ⁴	318,239	2,900	321,139	49,553

¹Not specified whether green or roasted; presumably green coffee.

²Destinations not given prior to 1860.

³Values not reported prior to 1885.

⁴Data for January 1 to June 14, 1900 only.

Source: 1845-69, Thrum, *Hawaiian Almanac and Annual*, 1876 ('we are indebted to the courtesy of Col. W. F. Allen, Collector General of Customs'); 1870-1900, *Annual Report of the Collector General of Customs*.

Table 6.--Volume and Value of Hawaiian Green Coffee Exports to the United States, 1890-1904

Year ¹	Quantity	Value
	Pounds	Dollars
1890	90,238	17,542
1891	23,401	5,001
1892	10,810	2,628
1893	20,332	4,864
1894	108,265	22,333
1895	183,680	36,168
1896	131,343	25,063
1897	376,484	68,441
1898	704,113	110,319
1899	779,796	117,354
1900	448,119	64,428
1901	²	²
1902	1,082,794	114,290
1903	1,852,162	227,286
1904	1,372,249	169,172

¹Fiscal year, ending June 30.

²Hawaii became a territory of the United States in 1900; data on coffee exports from Hawaii as a Territory of the United States are not recorded prior to 1902.

Source: *Commerce and Navigation of the United States*, U. S. Treasury Dept., Bureau of Statistics.

Table 7.--Volume and Value of Hawaiian Green Coffee Exports
to the United States, 1905-1947

Calendar year	Quantity	Value	Manifested value, per pound
	Pounds	Dollars	Cents
1905 ¹	1,153,585	140,935	12.2
1906 ¹	1,816,953	206,460	11.4
1907 ¹	889,704	105,902	11.9
1908 ¹	2,081,858	248,797	12.0
1909	1,943,203	239,488	12.3
1910	2,515,603	305,539	12.1
1911	2,903,887	419,464	14.4
1912	1,785,920	289,043	16.2
1913	3,393,009	530,533	15.6
1914	3,501,698	518,064	14.8
1915	2,547,488	386,464	15.2
1916	2,855,095	431,354	15.1
1917	1,226,345	181,464	14.8
1918	4,485,843	620,682	13.8
1919	3,144,351	652,837	20.8
1920	1,885,703	476,033	25.2
1921	4,183,046	650,036	15.5
1922	2,833,589	440,298	15.5
1923	2,170,334	407,535	18.8
1924	2,614,896	602,461	23.0
1925	3,590,104	980,012	27.3
1926	1,717,599	471,560	27.5
1927	5,435,452	1,397,720	25.7
1928	3,698,680	982,731	26.6
1929	5,299,562	1,323,352	25.0
1930	5,886,868	1,093,108	18.6
1931	6,636,656	1,066,872	16.1
1932	7,759,695	925,677	11.9
1933	4,158,135	536,379	12.9
1934	5,467,715	642,962	11.8
1935	5,399,330	613,637	11.4
1936	3,918,271	427,697	10.9
1937	4,075,551	439,439	10.8
1938	2,523,894	286,165	11.3
1939	2,479,048	288,838	11.7

Continued

Table 7.--(continued)

Calendar year	Quantity	Value	Manifested value, per pound
	Pounds	Dollars	Cents
1940	1,322,280	128,518	9.7
1941	2,490,007	269,432	10.8
1942	80	20	25.0
1943	0	0	-
1944	0	0	-
1945	1,768	549	31.1
1946	7,146,597	882,463	12.3
1947	5,080,393	1,530,809	30.1

¹Includes a small quantity of roasted coffee converted to green basis (1 pound of roasted coffee is equivalent to 1.1905 pounds of green). Roasted coffee exported to the United States is not reported for other years.

Source: 1905-1912, *Monthly Summary of Commerce and Finance*, U. S. Dept. of Commerce and Labor, Bureau of Statistics; 1913-43, *Monthly Summary of Foreign Commerce of the United States*, U. S. Dept. of Commerce, Bureau of Foreign and Domestic Commerce; 1944, *United States Trade in Domestic and Foreign Merchandise with Hawaii*, U. S. Dept. of Commerce, Bureau of the Census, Report No. FT800 Supplement; 1945-47, *United States Trade in Merchandise and Gold and Silver with United States Territories and Possessions*, U. S. Dept. of Commerce, Bureau of the Census, Report No. FT800.

Table 8.--Volume and Value of Hawaiian Coffee Exports to Foreign Countries, 1901-1917

Fiscal year ¹	Green		Roasted		Roasted, converted to green basis ²	Total exports, green basis
	Quantity	Value	Quantity	Value		
	Pounds	Dollars	Pounds	Dollars	Pounds	Pounds
1901	497,559	72,584	0	0	-	497,559
1902	127,304	12,354	200	40	238	127,542
1903	78,292	9,554	300	60	357	78,649
1904	109,719	14,988	3	3	-	109,719
1905	106,309	12,966	1,972	107	2,347	108,656
1906	163,605	19,069	610	122	726	164,331
1907	128,662	15,828	82	22	98	128,760
1908	130,573	17,079	1,111	173	1,323	131,896
1909	209,091	26,548	225	41	268	209,359
1910	350,660	41,805	396	93	471	351,131
1911	744,608	90,704	8,956	2,146	10,662	755,270
1912	330,855	55,813	23,174	5,605	27,589	358,444
1913	760,220	140,695	3	3	-	760,220
1914	1,077,148	167,423	3	3	-	1,077,148
1915	1,172,332	165,853	10,466	2,399	12,460	1,184,792
1916	550,545	76,144	12,756	2,652	15,186	565,731
1917	977,386	159,681	2,690	571	3,202	980,588

¹Ending June 30.

²One pound of roasted coffee is equivalent to 1.1905 pounds of green.

³Data not reported.

Source: 1901-1903, *Foreign Commerce and Navigation of the United States*, U. S. Treasury Dept., Bureau of Statistics; 1904-1911, *Commerce and Navigation of the United States*, U. S. Dept. of Commerce and Labor, Bureau of Statistics; 1912, *Commerce and Navigation of the United States*, U. S. Dept. of Commerce and Labor, Bureau of Foreign and Domestic Commerce; 1913-17, *Commerce and Navigation of the United States*, U. S. Dept. of Commerce, Bureau of Foreign and Domestic Commerce.

Table 9.—Volume and Value of Hawaiian Coffee Exports to Foreign Countries, 1918-1949

Calendar year	Green			Roasted			Roasted coffee converted to green basis ¹	Total exports, green basis
	Quantity	Value	Manifested value, per pound	Quantity	Value	Manifested value, per pound		
	Pounds	Dollars	Cents	Pounds	Dollars	Cents	Pounds	Pounds
1918	1,281,437	185,310	14.5	8,545	2,156	25.2	10,173	1,291,610
1919	498,480	114,053	22.9	6,841	2,825	41.3	8,144	506,624
1920	675,725	195,299	28.9	11,872	4,881	41.1	14,134	689,859
1921	790,900	118,804	15.0	5,175	1,990	38.5	6,161	797,061
1922	858,010	144,654	16.9	5,346	1,853	34.7	6,364	864,374
1923	872,630	162,115	18.6	925	295	31.9	1,101	873,731
1924	967,705	236,780	24.5	71,940	15,355	21.3	85,645	1,053,350
1925	1,512,824	400,626	26.5	2,092	805	38.5	2,491	1,515,315
1926	1,434,800	404,621	28.2	1,457	754	51.8	1,735	1,436,535
1927	1,544,894	382,089	24.7	5,060	2,417	47.8	6,024	1,550,918
1928	1,452,586	386,095	26.6	10,459	4,515	43.2	12,451	1,465,037
1929	1,799,644	615,243	34.2	8,855	3,157	35.7	10,542	1,810,186
1930	1,769,141	308,500	17.4	4,038	1,573	39.0	4,807	1,773,948
1931	1,524,850	239,364	15.7	89,862	14,705	16.4	106,981	1,631,831
1932	2,095,463	250,562	12.0	1,412	433	30.7	1,681	2,097,144
1933	2,095,095	227,646	10.9	3,860	1,156	30.0	4,595	2,099,690

Continued

Table 9.—(continued)

Calendar year	Green			Roasted			Roasted coffee converted to green basis ¹	Total exports, green basis
	Quantity	Value	Manifested value, per pound	Quantity	Value	Manifested value, per pound		
	Pounds	Dollars	Cents	Pounds	Dollars	Cents	Pounds	Pounds
1934	2,078,392	270,004	13.0	3,756	1,142	30.4	4,472	2,082,864
1935	2,567,845	291,248	11.3	6,912	1,946	28.2	8,229	2,576,074
1936	2,849,426	305,189	10.7	3,758	1,023	27.2	4,474	2,853,900
1937	3,928,926	435,225	11.1	4,552	1,223	26.9	5,419	3,934,345
1938	3,783,455	429,744	11.4	39,606	4,906	12.4	47,151	3,830,606
1939	3,364,446	387,506	11.5	2,634	668	25.4	3,136	3,367,582
1940	3,879,028	387,632	10.0	4,061	916	22.6	4,835	3,883,863
1941	2,801,870	296,566	10.6	1,440	274	19.0	1,714	2,803,584
1942	0	0	-	0	0	-	0	0
1943	0	0	-	0	0	-	0	0
1944	0	0	-	0	0	-	0	0
1945 ²								
1946 ²								
1947 ²								
1948	467,140	2		6,555	2		7,804	474,944
1949	352,812	2		6,685	2		7,958	360,770

¹One pound of roasted coffee is equivalent to 1.1905 pounds of green coffee.

²Statistics not available at United States Customs Office in Honolulu.

Source: 1918-40, *Foreign Commerce and Navigation of the United States*, U. S. Dept. of Commerce, Bureau of Foreign and Domestic Commerce; 1941-44, *Foreign Commerce and Navigation of the United States*, U. S. Dept. of Commerce, Bureau of the Census; 1948-49, U. S. Customs Office, Marine Division, Honolulu.

Table 10.—Volume and Value of Hawaiian Coffee Imports from the United States, 1905-1947

Calendar year	Green ¹			Roasted ¹			Roasted coffee converted to green basis ²	Total imports, green basis
	Quantity	Value	Manifested value, per pound	Quantity	Value	Manifested value, per pound		
	Pounds	Dollars	Cents	Pounds	Dollars	Cents		
1905				101,383	13,431	13.2		
1906				71,253	11,334	15.9		
1907				57,804	8,953	15.5		
1908				80,475	12,388	15.4		
1909				99,152	15,079	15.2		
1910				129,563	19,949	15.4		
1911				81,545	14,689	18.0		
1912				87,126	16,132	18.5		
1913				48,123	10,513	21.8		
1914				14,917	4,409	29.6		
1915				12,091	3,578	29.6		
1916				21,027	6,124	29.1		
1917				20,917	6,245	29.9		
1918				67,093	12,552	18.7		
1919				154,275	29,488	19.1		
1920				200,854	39,793	19.8		
1921				68,637	16,581	24.2		
1922				68,651	16,708	24.3		
1923				244,516	43,654	17.9		
1924				257,897	59,899	23.2		
1925				129,344	44,041	34.1		
1926				236,632	74,415	31.4		
1927				442,767	113,691	25.7		
1928				582,067	176,085	30.3		
1929				741,743	205,558	27.7		
1930	133,916	21,606	16.1	524,239	123,991	23.7	624,107	758,023
1931	363,264	41,058	11.3	448,505	107,331	23.9	533,945	897,209

Continued

Table 10.—(continued)

Calendar year	Green ¹			Roasted ¹			Roasted coffee converted to green basis ²	Total imports, green basis
	Quantity	Value	Manifested value, per pound	Quantity	Value	Manifested value, per pound		
	Pounds	Dollars	Cents	Pounds	Dollars	Cents	Pounds	Pounds
1932	334,766	35,282	10.5	563,080	116,719	20.7	670,347	1,005,113
1933	305,560	31,217	10.2	468,239	98,036	20.9	557,439	862,999
1934	447,255	47,140	10.5	523,655	105,657	20.2	623,411	1,070,666
1935	517,741	41,886	8.1	522,258	115,899	22.2	621,748	1,139,489
1936	446,171	36,830	8.3	540,672	116,776	21.6	643,670	1,089,841
1937	30,998	3,952	12.7	786,005	145,954	18.6	935,739	966,737
1938	282,163	25,450	9.0	1,042,696	195,755	18.8	1,241,330	1,523,493
1939	568,504	39,056	6.9	938,411	198,701	21.2	1,117,178	1,685,682
1940	365,797	24,960	6.8	949,187	219,837	23.2	1,130,007	1,495,804
1941	898,525	85,919	9.6	1,808,412	396,682	21.9	2,152,914	3,051,439
1942	106,668	13,395	12.6	1,927,798	537,840	27.9	2,295,044	2,401,712
1943	72,994	9,155	12.5	847,798	241,190	28.4	1,009,304	1,082,298
1944	88,000	3		1,943,805	575,795	29.6	2,314,100	2,402,100
1945	20,000	3		2,006,018	576,254	28.7	2,388,164	2,408,164
1946	-	-		1,637,131	518,308	31.7	1,949,004	1,949,004
1947	68,754	14,998	21.8	2,361,632	1,064,630	45.1	2,811,523	2,880,277

¹Green and roasted coffee not segregated by U. S. Dept. of Commerce before 1930.

²One pound of roasted coffee is equivalent to 1.1905 pounds of green coffee.

³Not available.

Source: 1905-1912, *Monthly Summary of Commerce and Finance*, U. S. Dept. of Commerce and Labor, Bureau of Statistics; 1912-43, *Monthly Summary of Foreign Commerce of the United States*, U. S. Dept. of Commerce, Bureau of Foreign and Domestic Commerce; 1944 roasted coffee, *United States Trade in Domestic and Foreign Merchandise with Hawaii*, U. S. Dept. of Commerce, Bureau of the Census, Report No. FT800 Supplement; 1945-47 roasted coffee and 1947 green coffee, *United States Trade in Merchandise and Gold and Silver with United States Territories and Possessions*, U. S. Dept. of Commerce, Bureau of the Census, Report No. FT800; 1944, 1945 green coffee, *United States Trade in Coffee, Tea and Cocoa Beans*, 1935-45, U. S. Dept. of Commerce, Office of Domestic Commerce.

Table 11.—*Hawaiian Coffee Production, 1921-1949; Exports, 1900-1949;
Imports and Balance of Exports, 1905-1947*

Year ¹	Production	Total exports, green basis	Total imports, green basis ²	Balance of exports, green basis
1,000 pounds				
1900		448 ³		
1901		498 ⁴		
1902		1,210 ⁵		
1903		1,931 ⁵		
1904		1,482 ⁵		
1905		1,262 ⁶	101	1,161
1906		1,981 ⁶	71	1,910
1907		1,018 ⁶	58	960
1908		2,214 ⁶	80	2,134
1909		2,153 ⁶	99	2,054
1910		2,867 ⁶	130	2,737
1911		3,659 ⁶	82	3,577
1912		2,144 ⁶	87	2,057
1913		4,153 ⁶	48	4,105
1914		4,579 ⁶	15	4,564
1915		3,732 ⁶	12	3,720
1916		3,421 ⁶	21	3,400
1917		2,207 ⁶	21	2,186
1918		5,777	67	5,710
1919		3,651	154	3,497
1920		2,576	201	2,375
1921	4,600	4,980	69	4,911
1922	4,700	3,698	69	3,629
1923	4,700	3,044	245	2,799
1924	4,175	3,668	258	3,410
1925	6,500	5,105	129	4,976
1926	4,575	3,154	237	2,917
1927	6,425	6,986	443	6,543
1928	6,000	5,164	582	4,582
1929	8,475	7,110	742	6,368
1930	8,847	7,661	758	6,903
1931	10,000	8,268	897	7,371
1932	9,808	9,857	1,005	8,852
1933	9,233	6,258	863	5,395

Continued

Table 11.--(continued)

Year ¹	Production	Total exports, green basis	Total imports, green basis ²	Balance of exports, green basis
1,000 pounds				
1934	10,388	7,551	1,071	6,480
1935	9,659	7,975	1,139	6,836
1936	9,828	6,772	1,090	5,682
1937	9,047	8,010	967	7,043
1938	8,079	6,355	1,523	4,832
1939	8,454	5,847	1,686	4,161
1940	8,002	5,206	1,496	3,710
1941	8,317	5,294	3,051	2,243
1942	7,000	-	2,402	
1943	7,193	0	1,082	
1944	6,789	0	2,402	
1945	7,656	27	2,408	
1946	6,300	7,147 ⁷	1,949	
1947	6,900	5,080 ⁷	2,880	
1948	6,990	475 ⁸		
1949	5,900	361 ⁸		

¹Production on fiscal year basis, ending June 30. exports on calendar year basis, except as noted.

²Green and roasted not segregated prior to 1930.

³To United States only. exports to foreign countries not available; fiscal year basis.

⁴Destination not specified; fiscal year basis.

⁵Fiscal year basis.

⁶To United States on calendar year. to foreign countries on fiscal year basis.

⁷Does not include exports to foreign countries.

⁸Exports to foreign countries only; exports to United States not available.

Source: Summarized from tables 2, 6, 7, 8, 9, and 10, pages 3, 16, 17, 18, 19, and 21.

SUMMARY

Hawaiian coffee is of minor significance in world markets. However, it is an important crop of the Kona district. Kona coffee is produced on small farms, but the aggregate area is about 3,500 acres. The crop is harvested in the fall and early winter months and is usually sold in the spring. Production varies considerably from year to year. In recent years, the size of the crop has varied from 7,656,000 pounds, on a green basis, in 1944-45 to 4,300,000 pounds for the 1949-50 crop.

Markets for Hawaiian green coffee are the mainland United States, the Philippines, and other eastern countries. While Hawaii exports much of its green coffee, the Territory also imports large quantities of the established brands of mainland coffee blends. In the year 1947, exports of Hawaiian green coffee to the United States were 5,080,000 pounds, while imports of mainland blends were 2,880,000 pounds, on a green basis, making a net export balance of 2,200,000 pounds.

In Hawaii, coffee consumption was 13.1 pounds per person in 1941. Per capita consumption in the mainland United States that year was higher--15.6 pounds. Consumption is high in the Scandinavian countries, but postwar coffee consumption in middle European countries is low.

Hawaiian coffee belongs to the *C. arabica* species that constitutes more than 90 per-

cent of the world's market coffee. Brazil is the largest producer of *Arabica*, and its exports are described as 'Brazils,' in contrast to coffees grown in all other countries, described as 'milds.' Kona coffee belongs to the 'milds' class that is used largely for blending purposes to give the desired flavor to the more plentiful Brazils. Two of the better known milds are Medellins and Manizales, from Colombia. These types command premium prices, as does Kona coffee. Santos coffees from Brazil are in a somewhat lower price class and Rio coffees from Brazil still lower.

Prices for coffee are described as 'futures' and 'spot.' Trading in futures contracts in the United States can be carried on only on the New York Coffee and Sugar Exchange. The basis of trading consists of contracts to deliver during a specified month not more than a year in advance. Trading in futures is carried on by both United States roasters and dealers and foreign shippers to reduce the risk of sharp price changes. 'Spot' prices are for coffee actually at warehouse or wharf, or for purchases arranged directly between buyer and seller for a specified rate of delivery in the future. Both futures and spot prices are quoted on the basis of the type of coffee and the origin. Kona coffee is not traded on the New York Coffee and Sugar Exchange, but the prices of world coffees quoted by the Exchange largely determine the price of Kona coffee.

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